

# **FLA LOG "BGA Consortium"**

## **... and much more!**

Logistics and other engineering communities come together to discuss issues surrounding Ball Grid Array (BGA) technology in military and commercial systems. Representatives from several different companies and disciplines will present—and discuss—the latest cutting-edge information. Presentations will include materials ranging from design and development, through manufacturing and will include product support and repair.

### **Goal of the BGA consortium:**

- Explore differences in design, manufacturing and service, between the uses of BGA technology in computers, telecommunications, military and space.
- Develop common ground where these communities can share information within the constraints of proprietary qualification testing.
- Evaluate potential for the military and space communities where BGA products could be required to survive 20 years, 30 years, or longer.

**Why Ball Grid Array?** Ball Grid Array (BGA) technology has been sweeping through various design and manufacturing disciplines. The advantages offered by BGA include:

- Miniaturization advancement which promises even smaller packages.
- Improved heat dissipation and increased circuit speed efficiency.
- Large lead pitches facilitate manufacturing efficiency

**What is BGA?** An alternative to peripheral array packages (PAP), BGA component connections use balls of solder applied to large portions of the component package bottom:

- Effective high-pin-count connections with reduced connection stress.
- More packages per board since connections are not around the periphery.
- Connections are less flexible and more robust providing improved reliability.

**BGA Challenges** BGA technology has its own unique set of considerations. These can limit its use to applications where redesign benefits justify adopting a new production process:

- BGA is not compatible with mixed soldering methods on the same board.
- BGA is less suited to low volume irregular-rate production processes.
- Capital equipment expense can be quite significant.

### **What's required to Service and Support BGA?**

- The solder joint is obstructed by the package and cannot be visually inspected.
- Typical test equipment will not satisfy BGA requirements.
- Capabilities required are 3-D Laminography, ERSA Scope and other equipment.

### **Seminar Schedule**

- One of several Tracks during the two-day Florida LOG 2002 conference.
- Cost-effective orientation, training and discussion with experts in the field.
- See the attached FLA LOG 2002 brochure for further information.